



Product: [1212F](#)

Category 5E+ Cable, 4 Pair, F/UTP, CMR



Product Description

Category 5E+ Premise Horizontal Cable (350MHz), 4 Pair, 24 AWG Solid Bare Copper Conductors, F/UTP - Foil Shielded, Riser-CMR, PVC Jacket

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, PoE++, PoE+, PoE, Noisy Environments
------------------------	---

Construction Details

Conductor

Size	Stranding	Material	Number of Pairs
24 AWG	Solid	BC - Bare Copper	4

Insulation

Material	Color Code
PO - Polyolefin	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Polyester + Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Outer Jacket

Material	Nom. Diameter
PVC - Polyvinyl Chloride	0.260 in (6.60 mm)

Overall Cable Diameter (Nominal):	0.260 in (6.60 mm)
-----------------------------------	--------------------

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km (28.6 Ohm/1000ft)	330 pF/100m

Delay

Frequency	Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
100 MHz	537.6 ns/100m	45 ns/100m	70%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted) [Ohm]	Max./Min. Fitted Impedance [Ohm]
1	2.0 dB/100m	70.3	68.3	70.3	66.3	67.8	64.8	20.0	100 ± 15	100 ± 15
4	4.0 dB/100m	61.3	59.3	59.3	55.3	55.8	52.8	23.0	100 ± 15	100 ± 15
8	5.7 dB/100m	56.8	54.8	53.1	49.1	49.7	46.7	24.5	100 ± 15	100 ± 15
10	6.4 dB/100m	55.3	53.3	50.9	46.9	47.8	44.8	25.0	100 ± 15	100 ± 15
16	8.1 dB/100m	52.2	50.2	46.1	42.1	43.7	40.7	25.0	100 ± 15	100 ± 15
20	9.1 dB/100m	50.8	48.8	43.7	39.7	41.8	38.8	25.0	100 ± 15	100 ± 15

25	10.2 dB/100m	49.3	47.3	41.1	37.1	39.8	36.8	24.3	100 ± 15	100 ± 15
31.25	11.4 dB/100m	47.9	45.9	38.5	34.5	37.9	34.9	23.6	100 ± 15	100 ± 15
62.5	16.4 dB/100m	43.4	41.4	29.0	25.0	31.9	28.9	21.5	100 ± 15	100 ± 15
100	21.0 dB/100m	40.3	38.3	21.3	17.3	27.8	24.8	20.1	100 ± 15	100 ± 15
155	26.6 dB/100m	37.4	35.4	12.8	8.9	24.0	21.0	18.8	100 ± 22	100 ± 15
200	30.5 dB/100m	35.8	33.8	7.3	3.3	21.8	18.8	18.0	100 ± 22	100 ± 15
250	34.4 dB/100m	34.3	32.3	1.9		19.8	16.8	17.3	100 ± 32	100 ± 15
300	38.0 dB/100m	33.1	28.2			18.2	15.2	16.8	100 ± 32	100 ± 15
350	41.4 dB/100m	32.1	27.2			16.9	13.9	16.3	100 ± 32	100 ± 15
400	44.6 dB/100m	31.3	26.3					15.9		
450	47.6 dB/100m	30.5	25.6					15.5		

Voltage

UL Voltage Rating
300 V (CMR)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-20°C To +75°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
2.25 in (57.2 mm)	2.75 in (69.9 mm)

Max. Pull Tension:	25 lbs (11 kg)
Bulk Cable Weight:	30 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Reaction to Fire:	UL 1666 Riser, FT4, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
NEC / UL Compliance:	Article 800, CMR
CEC / C(UL) Compliance:	CMR
ICEA Compliance:	S-90-661
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3
NEMA Compliance:	NEMA WC-63.1
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e
Third Party Performance Verification:	Category 5e
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Plenum Number:	1213F

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 350 MHz are for Engineering Information Only. Shield is Bonded to Jacket Inner Wall for Electrical Stability. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
--------	--

History

Update and Revision:	Revision Number: 0.486 Revision Date: 11-09-2022
----------------------	--

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC
1212F 0101000	Black	Reel	1,000 ft	612825108658

1212F 010A1000	Black	Reel-in-Box	1,000 ft	612825108641
1212F 006A500	Blue	Reel-in-Box	500 ft	612825108573
1212F 0061000	Blue	Reel	1,000 ft	612825108580
1212F 006A1000	Blue	Reel-in-Box	1,000 ft	612825108566
1212F 0081000	Gray	Reel	1,000 ft	612825108603
1212F 008A1000	Gray	Reel-in-Box	1,000 ft	612825108597
1212F 0051000	Green	Reel	1,000 ft	612825108559
1212F 005A1000	Green	Reel-in-Box	1,000 ft	612825108542
1212F 0031000	Orange	Reel	1,000 ft	612825108511
1212F 003A1000	Orange	Reel-in-Box	1,000 ft	612825108504
1212F 0021000	Red	Reel	1,000 ft	612825108498
1212F 002A1000	Red	Reel-in-Box	1,000 ft	612825108481
1212F 009A500	White	Reel-in-Box	500 ft	612825108627
1212F 0091000	White	Reel	1,000 ft	612825108634
1212F 009A1000	White	Reel-in-Box	1,000 ft	612825108610
1212F 0041000	Yellow	Reel	1,000 ft	612825108535
1212F 004A1000	Yellow	Reel-in-Box	1,000 ft	612825108528

© 2022 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.